PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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Applicant:	Lawrence R. MILLS
Title:	VIDEO USER INTERFACE SYSTEM AND METHOD
Examiner:	Christopher G. FINDLEY
Group Art Unit:	2482
Attorney Docket No:	1281-87U (C4-1207)

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P.O. Box 1450
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APPEAL BRIEF

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed December 9, 2011, in response to the Final Office Action dated August 17, 2011, wherein Applicant appeals the Examiner's rejection of Claims 1-5, 9, 11, 12, 14-21 and 23-26.

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I. Real Party in Interest

The real party in interest is Sensormatic Electronics, LLC, which is the assignee of the subject application by virtue of assignment recorded on Reel/Frame 024213/0049 on April 9, 2010.

II. Related Appeals and Interferences

None.

III. Status of Claims

Claims 1-5, 9, 11, 12, 14-21 and 23-26 are pending in this Application. Claims 1-5, 9, 11, 12, 14-21 and 23-26 have been finally rejected, and it is from the final rejection of Claims 1-5, 9, 11, 12, 14-21 and 23-26 that this Appeal is taken. Claims 6-8, 10, 13 and 22 have been cancelled.

IV. Status of Amendments

The claims have not been amended subsequent to the imposition of the Final Office Action dated August 17, 2011.

V. Summary of Claimed Subject Matter

The present invention, as recited in independent Claims 1, 16 and 21, is directed toward a method and system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area as described throughout the Specification including ¶¶ [0020] to [0086] and FIGS. 1-2 and 5-6.

With respect to Claim 1, the system comprises a buffer configured to receive wide-angle image data corresponding to the monitored area (¶¶ [0008], [0034], [0070] and [0077]). A processor is operably coupled to the buffer in which the processor is configured to generate, from the buffered wide angle image data, panoramic view data of a panoramic view of the monitored area (¶¶ [0008], [0036], [0047], [0073] and [0082]). The processor is configured to generate, from the buffered wide-angle image data, virtual view data representing a virtual view of a portion of the panoramic view (¶¶ [0008], [0036], [0047], [0056], [0073] and [0082]). The processor encodes the panoramic view data and the virtual view data for display (¶¶ [0039], [0074] and [0083]).

With respect to Claim 16, the method comprises buffering wide-angle image data corresponding to a wide-angle image of a monitored area (¶¶ [0009], [0034], [0070] and [0077]). The method includes generating, from the buffered wide angle image data, panoramic view data of a panoramic view of the monitored area using a panoramic transformation (¶¶ [0009], [0036], [0047], [0073] and [0082]). The method includes generating, from the buffered wide-angle image data, virtual view data using a virtual view transformation in which the virtual view data represents a virtual view of a portion of the panoramic view (¶¶ [0009], [0036], [0056], [0073] and [0082]).

With respect to Claim 21, the system comprises means for buffering wide-angle image data (¶ [0034]) corresponding to the monitored area (¶¶ [0011], [0034], [0070] and [0077]). The system includes means for processing and generating, from said buffered wide-angle image data received from said storing means, panoramic view data of a panoramic view of the monitored area (¶¶ [0011], [0036], [0047], [0073] and [0082]). The system includes means for processing

and generating, from the buffered wide-angle image data, virtual view data representing a virtual view of a portion of the panoramic view (¶¶ [0011], [0036], [0073], [0082] and [0056]).

VI. Grounds of Rejection to be Reviewed on Appeal

1. Claims 1-4, 11-12, 14, 16-18, 20, 21, 23 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Koyanagi et al. (U.S. Publication No: 2004/0257,436 A1, hereinafter referred to as "Koyanagi") in view of Kuban et al. (U.S. Patent No: 5,359,363, hereinafter referred to as "Kuban").
2. Claims 9 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Koyanagi et al. (U.S. Publication No: 2004/0257,436 A1, hereinafter referred to as "Koyanagi") in view of Kuban et al. (U.S. Patent No: 5,359,363, hereinafter referred to as "Kuban") in view of Monroe (U.S. Publication No: 2007/0182,819 A1, hereinafter referred to as "Monroe").
3. Claims 5, 15, 24 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Koyanagi et al. (U.S. Publication No: 2004/0257,436 A1, hereinafter referred to as "Koyanagi") in view of Kuban et al. (U.S. Patent No: 5,359,363, hereinafter referred to as "Kuban") in view of Poelstra (U.S. Patent No: 5,563,650, hereinafter referred to as "Poelstra").

VII. Argument

1. The Rejection of Claims 1-4, 11-12, 14, 16-18, 20, 21, 23 and 26 under 35 U.S.C. §103(a)

On page 3 of the Office Action, Claims 1-4, 11-12, 14, 16-18, 20, 21, 23 and 26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Koyanagi et al. (U.S. Publication No: 2004/0257,436 A1, hereinafter referred to as "Koyanagi") in view of Kuban et al. (U.S. Patent No: 5,359,363, hereinafter referred to as "Kuban"). For convenience of the Honorable Board in addressing the rejections, dependent Claims 2-4, 11-12 and 14 stand or fall with independent Claim 1, dependent Claims 17, 18 and 20 stand or fall with independent Claim 16 and dependent Claims 23 and 26 stand or fall with independent Claim 21. Applicant respectfully asserts that the rejections are made in error and request reversal thereof.

A. The proposed modification of Koyanagi with Kuban changes the principle operation of Koyanagi such that there is no motivation to combine the references

Modifying Koyanagi with Kuban would change the "principle of operation of the prior art being modified" such that there is and can be no motivation to combine (M.P.E.P. § 2143.01)(citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). Applicant respectfully notes that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious" (M.P.E.P. § 2143.01)(citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)).

Koyanagi is directed to generating a panoramic picture by combining several pictures, e.g., combines pictures 1 to 10 (¶¶ [0053] and [0055]). Koyanagi's panoramic picture generation explicitly relies on using a *moving* "pan tilter camera 3" to photograph pictures, then mapping "adjacent pictures on the virtual spherical surface" such that the pictures can be "combined to

one panorama picture" (¶ [0053]). Koyanagi's generated panoramic picture requires a camera that pans and tilts in order to be able to photograph several pictures, then maps "adjacent pictures" in the virtual spherical surface (¶ [0053]).

Kuban is directed to a different principle of operation than Koyanagi in which Kuban relies on a "motionless camera surveillance system" that uses a fisheye lens (page 4 of the Office Action; Kuban col. 5, lines 10-16)(emphasis added). In particular, Kuban describes an "image of a grid pattern produced by a fisheye lens. This image has a field-of-view of 180 degrees and shows the contents of the environment throughout an entire hemisphere" (col. 5, lines 10-14). Kuban then corrects the distorted image produced by the fisheye lens such that it can be perceived by a human (col. 5, lines 10-27). In other words, Kuban's camera system is motionless due to the use of a fisheye lens that allows for a wide field of view but that generates a "significantly distorted" image requiring correction (col. 5, lines 14-16; FIG. 2).

Contrary to M.P.E.P. § 2143.01, modifying Koyanagi's generation of a panoramic image using a motion based pan tilter camera system with Kuban's motionless camera system would change the principle operation of Koyanagi by replacing Koyanagi's essential virtual sphere mapping and pan tilter camera. Pages 4-6 of the Office Action even appear to admit and rely on the fact that the combination of Koyanagi with Kuban changes the principle operation of Koyanagi's motion based pan tilter camera system. Page 4 of the Office Action summarily concludes that "one of ordinary skill in the art at the time of the invention would have found it obvious to combine the motionless region-of-interest generation of Kuban with the system of Koyanagi in order to conserve power by reducing the need to move a pan-tilter device", i.e., the combination replaces Koyanagi's essential panning/tilting camera and virtual sphere mapping (page 4 of the Office Action)(emphasis added). There is no suggestion in either reference of

power conservation as a benefit. Accordingly, one of ordinary skill in the art could not rely on power conservation for motivation. Further, Applicant's specification does not suggest that a motionless wide-angle camera is used to conserve power. Put simply, Applicant asserts that the teachings of Koyanagi combined with Kuban are not sufficient to render the claims *prima facie* obvious.

Accordingly, the Office Action has failed to establish a *prima facie* case of obviousness. Claims 1, 16 and 21 are believed patentable for at least this reason. Applicant respectfully requests that the rejection of Claims 1, 16 and 21 under 35 U.S.C. § 103(a) be reversed.

B. The Examiner fails to cite a reference or combination of references disclosing each and every element of Claims 1, 16 and 21

Even assuming the combination of Koyanagi and Kuban is proper in accordance with M.P.E.P. § 2143.01 (which Applicant respectfully asserts is not the case), the combination of references fail to disclose each and every element of Claims 1, 16 and 21. Independent Claims 1, 16 and 21 recite, in part, generating, "***from the buffered wide angle image data, panoramic view data*** of a panoramic view of the monitored area" and generating, "***from the buffered wide-angle image data[,] virtual view data*** representing a virtual view of a portion of the panoramic view" (emphasis added). Koyanagi and Kuban, whether considered individually or in combination, fail to disclose or suggest the above cited features of independent Claims 1, 16 and 21.

i. *The Office Action misinterprets Koyanagi and Applicants' claimed features*

Applicant asserts that page 3 of the Office Action misinterprets Koyanagi's generated panoramic picture by stating that Konayagi's panoramic picture discloses both Applicant's claimed wide angle image data and Applicant's claimed panoramic view data that is generated based on wide angle data (emphasis added). Koyanagi merely describes that a "monitor 2 displays the photographed screen 5 in an operation area 6A on the monitor 2" (¶ [0043]). A

"user designates a desired point or a desired area in the operation area 6A or the panorama operation area 6B with the mouse 8 so as to operate the pan tilter camera 3" (¶ [0043]). A "frame 6C that represents the current position and the angle of view of the pan tilter…[is] superimposed to the panorama picture" (¶ [0043]). Operation area 6B (Office Action interpreted "panoramic view") is merely a generated panoramic view (Office Action interpreted "wide angle image" data)(pages 2-3 of Office Action). In other words, operation area 6B cannot be generated based on Koyanagi's panoramic view because it is the panoramic view. Put simply, the Office Action cites the same element in Koyanagi as describing two of Applicants' claimed features, one of which is based on the other. As such, the Office Action misinterprets Koyanagi as disclosing the features of independent Claims 1, 16 and 21 when Koyanagi does not teach the features of Claims 1, 16 and 21. Kuban is not cited as teaching these features. Accordingly, the Office Action fails to establish a *prima facie* case of obviousness.

ii. *Koyanagi's and Kuban fail to disclose or suggest the above cited features of Claims 1, 16 and 21*

Even assuming the Office Action's interpretation of Koyanagi is correct (which Applicant respectfully asserts is not the case), Koyanagi and Kuban fail to disclose or suggest the features of Claims 1, 16 and 21. As discussed above with respect to Claims 1, 16 and 21, Koyanagi merely describes generating a panoramic picture based on several photographs taken by a pan tilter camera. Koyanagi does not generate panoramic view data and virtual view data from Koyanagi's panoramic picture (Office Action interpreted "wide-angle image data"). If follows that Koyanagi does not disclose or suggest generating Applicant's claimed panoramic view data and virtual view data from the buffered wide angle image data let alone doing so such that panoramic view data is a panoramic view of the monitored area and virtual view data

represents a virtual view of a portion of the panoramic view as recited in Claims 1, 16 and 21. As such, Koyanagi fails to disclose or suggest these features of Claims 1, 16 and 21.

Kuban fails to cure the deficiencies of Koyanagi. Kuban merely describes "a system to select a portion of the input image (fisheye or other wide angle) and then mathematically transform the image to provide the proper perspective for output" (col. 4, lines 61-66). "A portion of the image in [Kuban's] FIG. 2 has been corrected, magnified, and rotated to produce the image shown in [Kuban's] FIG. 3" (col. 5, lines 21-23). While Kuban describes that "only the portion of interest" and not the entire input image need be transformed (Kuban, col. 4, lines 67-68), Kuban's system does not generate both panoramic view data and virtual view data from buffered wide angle image data as recited in Claims 1, 16 and 21. As such, Kuban fails to cure the deficiencies of Koyanagi.

Accordingly, Koyanagi and Kuban, whether considered individually or in combination, fail to disclose or suggest the features of Claims 1, 16 and 21. Claims 1, 16 and 21 are believed patentable for at least this reason. Applicant respectfully requests that the rejection of Claims 1, 16 and 21 under 35 U.S.C. § 103(a) be reversed.

In sum, the Examiner has failed to cite a reference or combination of references that disclose or suggest each and every element of Applicant's claims as required for a rejection under 35 U.S.C. § 103. Applicant has identified multiple deficiencies in the rejections of Claims 1, 16 and 21.

C. The Examiner fails to cite a reference or combination of references disclosing each and every element of Claims 2-4, 11, 12, 14, 17, 18, 20, 23 and 26

Applicant notes that dependent Claims 2-4, 11, 12, 14, 17, 18, 20, 23 and 26 are believed patentable at least by virtue of their dependency on one or another of their respective base

independent Claims 1, 16 and 21, whose patentability is discussed above. Applicant therefore requests that the rejection of Claims 2-4, 11, 12, 14, 17, 18, 20, 23 and 26 be reversed.

2. The Rejection of Claims 9 and 19 under 35 U.S.C. §103(a)

On page 7 of the Office Action, Claims 9 and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Koyanagi et al. (U.S. Publication No: 2004/0257,436 A1, hereinafter referred to as "Koyanagi") in view of Kuban et al. (U.S. Patent No: 5,359,363, hereinafter referred to as "Kuban") in view of Monroe (U.S. Publication No: 2007/0182,819 A1, hereinafter referred to as "Monroe").

A. The Examiner fails to cite a reference or combination of references disclosing each and every element of Applicants' claimed invention

Claims 9 and 19 dependent from independent Claims 1 and 16, respectively. As explained above, Koyanagi and Kuban fail to teach or suggest at least one element of Claims 1 and 16. Monroe fails to teach or suggest the elements of Claims 1 and 16 not disclosed or suggested by Koyanagi and Kuban. For example, Monroe fails to teach or suggest generating, from the buffered wide angle image data, panoramic view data of a panoramic view of the monitored area and virtual view data representing a virtual view of a portion of the panoramic view. In contrast to Claims 1 and 16, Monroe describes "a multiple row panel camera" that uses "various image sensors C1 through C16" such as to track an object or person (¶ [0106]; FIG. 16).

Monroe's multiple row panel camera, that takes several photographs to generate a picture, does not disclose or suggest generating, from the buffered wide angle image data, "panoramic view data of a panoramic view of the monitored area" and "virtual view data representing a virtual view of a portion of the panoramic view" as recited in Claims 1 and 16. Therefore, Koyonagi, Kuban and Monroe, whether considered individually or in combination,

fail to disclose or suggest the features of Claims 1 and 16, from which Claims 9 and 19 depend. Hence, Claims 9 and 19 are allowable, at least by virtue of its dependency from an allowable Claim.

3. The Rejection of Claims 5, 15, 24 and 25 under 35 U.S.C. §103(a)

On page 8 of the Office Action, Claims 5, 15, 24 and 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Koyanagi et al. (U.S. Publication No: 2004/0257,436 A1, hereinafter referred to as "Koyanagi") in view of Kuban et al. (U.S. Patent No: 5,359,363, hereinafter referred to as "Kuban") in view of Poelstra (U.S. Patent No: 5,563,650, hereinafter referred to as "Poelstra").

A. The Examiner fails to cite a reference or combination of references disclosing each and every element of Applicants' claimed invention

Claims 5, 15, 24 and 25 depend from independent Claims 1 and 16, respectively. As explained above, Koyanagi and Kuban fail to teach or suggest at least one element of Claims 1 and 16. Poelstra fails to teach or suggest the elements of Claims 1 and 16 not disclosed or suggested by Koyanagi and Kuban. For example, Poelstra fails to teach or suggest generating, from the buffered wide angle image data, panoramic view data of a panoramic view of the monitored area and virtual view data representing a virtual view of a portion of the panoramic view. In contrast to Claims 1 and 16, Poelstra describes using a fish eye optic for creating a panoramic image based on a distorted fish eye image illustrated in FIG. 5 (col. 3, lines 17-21). Poelstra's CCD-camera with a fish eye optic does not disclose or suggest generating, "from the buffered wide angle image data," both panoramic view data of a panoramic view of the monitored area and virtual view data representing a virtual view of a portion of the panoramic view as recited in Claims 1 and 16. Therefore, Koyanagi, Kuban and Poelstra, whether considered individually or in combination, fail to disclose or suggest the features of Claims 1 and

16, from which Claims 5, 15, 24 and 25 depend. Hence, Claims 5, 15, 24 and 25 are allowable, at least by virtue of its dependency from an allowable Claim.

VIII. Conclusion

For the reasons provided above as well as provided in the record, the claim rejections are believed to be improper and a result of clear error by the Examiner. Accordingly, pending Claims 1-4, 11-12, 14, 16-18, 20, 21, 23 and 26 are believed to be in condition for allowance, and a reversal of the Examiner's rejections is respectfully requested.

The Commissioner is hereby authorized to credit overpayments or charge payment of any additional fees associated with this communication to Deposit Account No: 502104.

Respectfully submitted,

Date: January 30, 2012

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APPENDIX A: CLAIMS ON APPEAL

1. A system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area, said system comprising:

a buffer configured to receive wide-angle image data corresponding to the monitored area; and

a processor operably coupled to said buffer and configured to:

generate, from the buffered wide angle image data, panoramic view data of a panoramic view of the monitored area;

generate, from the buffered wide-angle image data virtual view data representing a virtual view of a portion of the panoramic view; and

encode the panoramic view data and the virtual view data for display.

2. A system according to claim 1, further comprising:

a user input module configured to provide user command data to said processor; and

said processor being further configured to determine the virtual view data based on the user command data.

3. A system according to claim 2, wherein the processor is further configured to determine reference data corresponding to an area in the panoramic view represented by the virtual view.

4. A system according to claim 2, further comprising a first video camera system having a first video camera operably coupled to said buffer and said processor, said first video camera system operable to generate wide-angle image data.

5. A system according to claim 4, wherein said first video camera system includes a fisheye lens.

6–8. Cancelled.

9. A system according to claim 4, further comprising:

a second video camera system operably coupled to said buffer and said processor, said second video camera system having a second video camera and being configured to aim the second video camera at a portion of the monitored area according to pan, tilt and zoom command data, and configured to capture video image data; and

wherein the processor is further configured to communicate pan, tilt and zoom command data to cause the first video camera system to aim the first video camera at the monitored area; and

wherein captured video image data from the second video camera is included in the virtual view.

10. Cancelled.

11. A system according to claim 4, wherein the system transforms wide-angle image data received by the buffer into virtual view data corresponding to the virtual view and into panoramic view data corresponding to the panoramic view in real time.

12. A system according to claim 2, further comprising a display device operably coupled to said processor to display the panoramic view and the virtual view.

13. Cancelled.

14. A system according to claim 12, further comprising at least one reference window overlaid on at least one portion of the panoramic view, each overlaid portion defining the portion of the panoramic view to which the virtual view corresponds, and the at least one reference window having a size and a position determined according to the user command data.

15. A system according to claim 14, wherein:

the panoramic view includes a first panoramic view and a second panoramic view, the first panoramic view corresponding to a first portion of the monitored area, and the second panoramic view corresponding to a remaining portion of the monitored area;

the virtual view includes a first virtual view and a second virtual view, the first virtual view corresponding to a first portion of the first panoramic view, and the second virtual view corresponding to a second portion of the second panoramic view; and

a combination of the first panoramic view and the second panoramic view provide a 360° view of the monitored area relative to a vertical axis.

16. A method of generating a graphical user interface, said method comprising:

buffering wide-angle image data corresponding to a wide-angle image of a monitored area;

generating, from the buffered wide angle image data, panoramic view data of a panoramic view of the monitored area using a panoramic transformation, and;

generating, from the buffered wide-angle image data, virtual view data using a virtual view transformation, the virtual view data representing a virtual view of a portion of the panoramic view.

17. A method according to claim 16, further comprising:

determining pan, tilt and zoom values;

determining a portion of the buffered wide-angle data to transform into virtual view data for the virtual view based on the pan, tilt and zoom values.

18. A method according to claim 17, further comprising determining reference data based on the pan, tilt and zoom values.

19. A method according to claim 18, wherein the buffered wide-angle data is received from a first video camera system, said methodology further comprising:

communicating pan, tilt and zoom commands to a second camera system; and

receiving virtual view data for the virtual view from the second camera system.

20. A method according to claim 16 further comprising encoding reference data, virtual view data and panoramic view data for output.

21. A system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area, said system comprising:

means for buffering wide-angle image data corresponding to the monitored area;

means for processing and generating, from said buffered wide-angle image data received from said storing means, panoramic view data of a panoramic view of the monitored area; and

means for processing and generating, from the buffered wide-angle image data, virtual view data representing a virtual view of a portion of the panoramic view.

22. Cancelled.

23. A system according to claim 14, wherein the size and the position of the at least one reference window determines pan, tilt and zoom values for the corresponding virtual view.

24. A system according to claim 15, wherein the at least one reference window is user-selectable for controlling the size and the position of the reference window to determine pan, tilt and zoom values for the corresponding virtual view.

25. A method according to claim 16, wherein the panoramic view includes:

a first panoramic view corresponding to a first portion of the monitored area;

a second panoramic view corresponding to a remaining portion of the monitored area; and

the first panoramic view and the second panoramic view combine to provide a 360° view of the monitored area relative to a vertical axis; and

wherein said method further comprises encoding the first panoramic view, the second panoramic view, and virtual view of a portion of at least one of the first panoramic view and the second panoramic view for simultaneous display.

26. A method according to claim 17, further comprising:

determining a position and a size of at least one reference window positioned over the portion of at least one of the at least one panoramic view corresponding to the virtual view, the position and size defined according to user command data; and

wherein the pan, tilt and zoom values are based upon the position and the size of the at least one reference window.

APPENDIX B: EVIDENCE APPENDIX

No evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the Examiner has been relied upon by Appellant in this Appeal, and thus no evidence is attached hereto.

APPENDIX C: RELATED PROCEEDINGS APPENDIX

Since Appellant is unaware of any related appeals and interferences, no decision rendered by a court or the Board is attached hereto.